

# PPVC MOLDS

## PPVC 模具系统



## COMPANY PROFILE 公司介绍

GETO is mainly engaged in green construction and new energy.

Green prefabricated building products include modular building (including PC and steel structures); assembly precast concrete components, prefabricated steel structures; aluminium formwork, steel formwork, steel-framed timber formwork, climbing systems, fair-faced concrete formwork, infrastructure formwork and scaffolding products.

New energy focuses on investment, EPC construction, and operation of commercial and industrial "Photovoltaics, Storage, and Charging" projects, while providing the "Green Energy Future Living" one-stop residential energy solution.

In 2021, GETO was listed on the ChiNext board of the Shenzhen Stock Exchange in China (Stock Code: SZ 300986). We have established 12 production bases globally and registered the "GETO®" international trademarks in 32 countries and regions, with products and services reaching worldwide markets.

志特集团主营绿色新型装配式建筑，新能源。

绿色新型装配式建筑包括：模块化房屋（包括 PC、钢结构两大类）；装配式 PC，装配式钢结构；铝模，钢模，钢框木模，爬升式模架，清水混凝土模架，公基建类模架。

新能源包括：工商业“光、储、充”项目投资、EPC 建设、运维，“绿能未来居”一站式家庭能源解决方案。

志特新材”于 2021 年在 A 股创业板挂牌上市（股票代码：SZ 300986），目前已在全球设立 12 大生产基地，在 32 个国家和地区注册了“GETO®”国际商标，产品和服务遍及全球。

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# 01 PRODUCT INTRODUCTION 产品介绍

Upholding the business philosophy of being customer-focused, GETO and its partners collaboratively committed to product development and upgrading works for the successful introduction of **PPVC (Prefabricated Prefinished Volumetric Construction) Molds** and its complementary products, as in compliance with the construction industrialization agenda proposed by the Singapore government.

The **PPVC Molds** take the whole room of a building as a module unit, complete the mold structure prefabrication in the factory, and then transport it to the construction site for assembly, casting, and molding the room module. It realizes the whole prefabricated room's one-time casting and molding.

志特顺应新加坡政府建筑工业化的倡议，秉持着以客户为中心的经营理念与合作伙伴共同经过多次的产品研发升级，成功推出 **PPVC 模具系统及其附属产品**。

**PPVC 模具**以建筑物的整个房间为一个模块单元，在工厂完成模具结构预制，然后运输到施工现场组装、浇注和成型房间模块，实现整个预制房间的一次性浇注和成型。



## TRADITIONAL IN SITU PRODUCTION VERSUS INDUSTRIALIZED PPVC PRODUCTION 传统现场生产 VS 工业化 PPVC 生产

### TRADITIONAL PRODUCTION SYSTEM 传统生产模式

The traditional system is more labour-intensive and most of the structural, architectural, and mechanical finishes have to be carried out at the building site. This implies using more people to manage at the site, more complicated work organization, and less quality control.

传统系统对劳动力的依赖度较高，大部分结构、建筑和机械装修工作必须在施工现场完成。这意味着需要更多人员在现场管理，工作组织更为复杂，质量控制难度较大。



### PPVC PRODUCTION SYSTEM PPVC 生产模式

The PPVC molds were prefabricated in the factory, with the entire production process under controlled conditions. Using standardized and streamlined procedures, it not only enhances production efficiency and product quality but also reduces the possibility of errors.

PPVC 模块化方法在工厂内预先生成模具，生产过程全程受控，采用标准化和简化的流程，不仅提升了生产效率和产品质量，还减少了出错的可能性。



## PPVC MOLDS PPVC 模具系统



### Aluminium formwork 铝合金模板

**Advantage 1:** Short lead period  
**优势 1:** 交货周期短

**Advantage 2:** Easy assembly and disassembly without using cranes  
**优势 2:** 方便装拆, 无需借助塔吊

**Advantage 3:** High scrap value  
**优势 3:** 残值高



### Automatic steel formwork 自动式钢模板

**Advantage 1:** Lower labour cost  
**优势 1:** 人工成本更低

**Advantage 2:** High construction efficiency  
**优势 2:** 施工效率高

**Advantage 3:** Applicable for different PPVC structures  
**优势 3:** 应用范围广泛



### Non-automatic steel formwork 非自动式钢模板

**Advantage 1:** Less material cost  
**优势 1:** 材料成本较低

**Advantage 2:** Easy design and mature technology  
**优势 2:** 设计简单, 加工工艺成熟

## GETO SERVICES 志特服务

**Customized design and production**

**定制化的设计生产服务**



**Professional on-site support**

**专业的现场安装指导服务**



**Qualified formwork system and finished product**

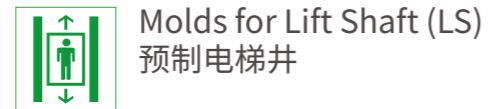
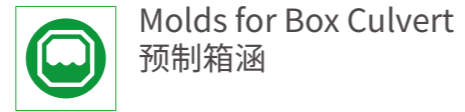
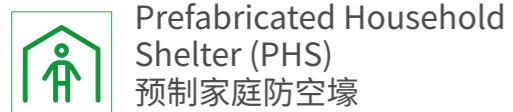
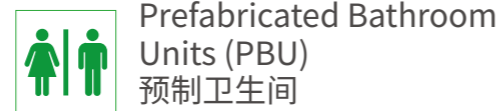
**高质量的产品交付和施工效果**



## 02 PRODUCT APPLICATIONS 产品应用

We have greatly diversified our range of molds for the production of volumetric precast concrete elements. In addition to room module, we also provide a variety of mold solutions for bathrooms, shelters, lift shafts, etc.

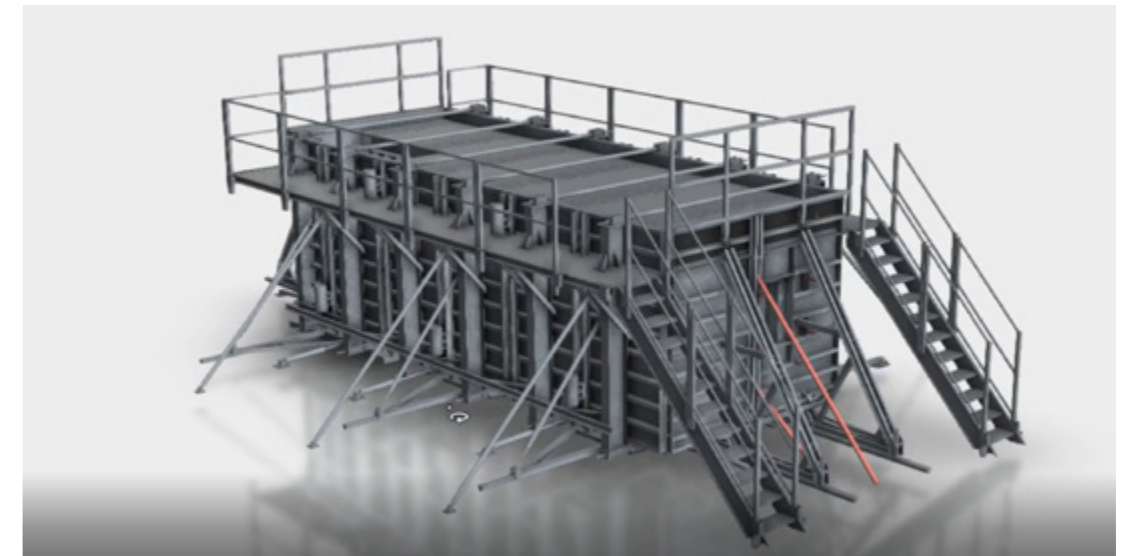
我们已经大大扩大了我们的模具组合，用于生产体积预制混凝土元件。除了用于住宅建筑的房间模块模具外，我们还为卫生间、避难所、电梯井等提供各种模具解决方案。



## PPVC PRECAST HOUSING MOLDS PPVC 整屋预制模具

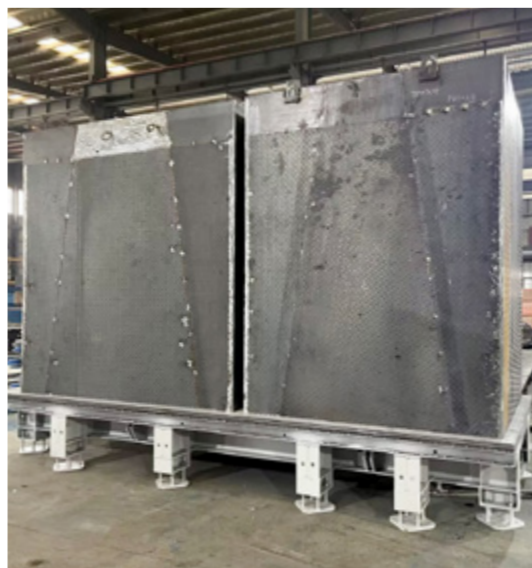
This system takes the whole room of a building as a module unit, completes the mold structure prefabrication in the factory, and then transports it to the construction site for assembly, casting and molding the room module. Precast housing molds can form all structures of a building, including deck, side wall, base floor, door opening and window at one time.

该系统以建筑物的整个房间为一个模块单元，在工厂完成模具结构预制，然后运输到施工现场组装、浇注和成型房间模块；房屋顶板、侧墙、底板、门洞、窗户等一次性浇筑成型。



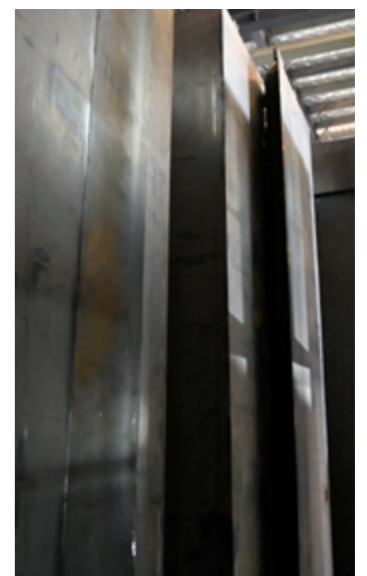
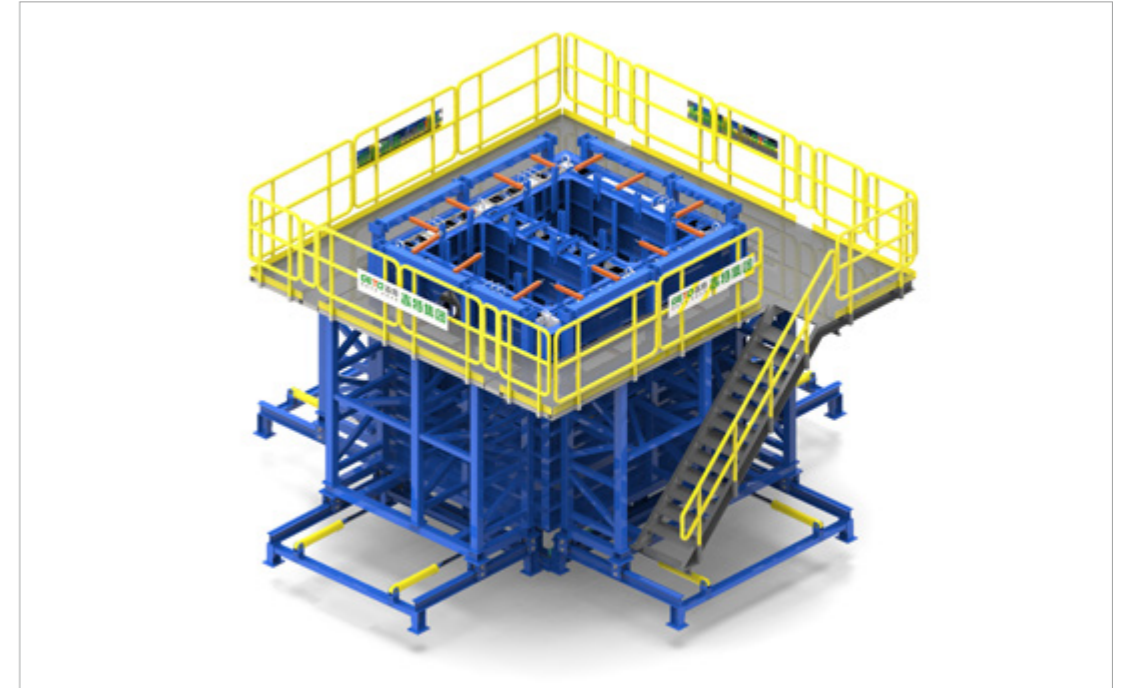
## Prefabricated Bathroom Units (PBU) Molds 预制卫生间模具

A 3D mold system for producing prefabricated bathroom units.  
用于生产预制卫生间单元的模具系统。



## Prefabricated Household Shelter (PHS) Molds 预制防空壕模具

A 3D mold system for producing prefabricated household shelter units.  
用于制造预制防空壕单元的模具系统。



## 03 ADVANTAGES 产品优势



### 1 High Construction Efficiency, Fast Finished Product; Clear Workflow, More Time and Labor Saving 施工效率高，成品速度快； 流程清晰，节省时间和人力

- Precast housing molds can form all structures at one time, reducing construction time. 50% higher efficiency compared with the traditional steel formwork.
- Clear production and workflow processes, reducing the time of searching and rearranging for material, greatly improving efficiency while saving significant labor and time.
- 一次性浇筑成型，极大缩短了预制周期。相比传统钢模具，施工效率上可得到 50% 以上的提升。
- 生产和工作流程清晰明确，减少现场查找和安排材料的时间，大大提高效率，同时节省大量人力和时间。

### 2 Better and Safer Construction Environment 改善施工环境，安全生产

- Less dust and noise is generated as precast molds and finishing are completed off-site, while significantly lowering labor intensity and improving construction safety.
- 在工地外使用预制模具完成成型，减少现场灰尘和噪音，同时降低工人劳动强度，提升施工安全性。



### 3 Automated Production, High-Quality Finish 自动化生产，成型质量好

- Extendable steel structure and automated control system enable mechanical clamping and demoulding, reducing labor costs by over 40% compared to traditional steel formwork.
- The self-equipped with internal and the external support frame system resist concrete side pressure without tie-rod system, reducing manual labor and improving precast quality. The finish achieves a fair-faced concrete effect, minimizing the risk of building water leakage.
- 伸缩式钢结构和自动化控制系统可实现机器操作，能够自动合模、脱模；与传统钢模板相比，人工成本上可节省 40% 以上。
- 自支撑内外模架无需穿墙螺杆即可抵抗混凝土侧压力，减少人工操作，提升预制构件质量，成型效果接近清水混凝土，降低房屋渗漏水的风险。

### 4 Reduced Weather-Related Fluctuations 减少天气相关的影响

- Reduction or elimination of working hours lost due to inclement weather and weather-related fluctuations in performance.
- 减少或消除因恶劣天气而损失的工作时间和与天气有关性能波动。

### 5 Environmentally Friendly 环境友好

- The green, low-carbon, and highly automated operating environment aligns with the global low-carbon economy trend and green building initiatives, gradually replacing conventional construction methods.
- 绿色、低碳、自动化程度高的作业环境，符合全球低碳经济的趋势和绿色建筑理念，正在逐步替代传统建筑技术。

# 04 OPERATIONAL FLOW 施工流程



## OVERALL WORKFLOW 总体流程

1 Molds made at the factory.  
在工厂制造模具。



2 Molds transported to the site.  
The modules are cast on site;  
the finished concrete modules  
are stacked like Lego pieces and  
fastened together on site.

运输模具到现场。在工地完成模块  
浇筑，并以类似乐高积木的方式在  
现场安装。



3 Concrete modules installed at  
the site.

现场安装模块。





## INSTALLATION STAGE 组装阶段

01

Cast in supporting pedestal (Required flatness assurance of the ground below it)  
浇筑支撑台座保证地面平整

02

Measure the ground horizontal level by line positioning  
测量地面水平并放线定位

03

Install base formwork and pre-embed tube sleeve  
安装底模，预埋套筒

04

Install the track rail  
安装轨道

05

Install the external formwork and raking shore  
安装外模及斜撑

06

Set up internal formwork for turnover installation  
拼装内模及翻转安装

07

Install door, windows and grooves  
安装门窗及压槽

08

Install the external oil tank, pump station A and B, and relative electric control system  
安装外模油缸及泵站 B、A，电控系统

09

Bind up steel bars, and pre-embed water and electrical pipes  
绑扎钢筋及预埋水电管

10

Close the internal formwork  
关闭内模

11

Install the vibrator  
安装振动器

12

Cast in concrete  
浇筑混凝土

## UTILIZATION STAGE 使用阶段

1

Move the external formwork to the intended place and tighten the tie-rod.  
移动外模就位并拧紧拉杆



External formwork:  
外模:

Set in a mobile tack rail at the bottom of external formwork. By using a hydraulic oil tank, the forward and backward mobility of the external formwork is controlled.

Meanwhile, adjustable tie-rod raking shore can be set along the sliding track for verticality adjustment of the formwork sides.

The formwork is reinforced by adopting the pulling strength between top formwork and bottom formwork.

外模底部设滑动轨道，采用液压油缸控制前后移动，滑动轨道处设可调螺杆斜撑进行垂直度的调节。模板加固方式采用顶部、底模对拉。

2

Hoist rebar into the formwork, and install in mechanical and electrical systems.  
吊装钢筋入模，安装水电



**3** Install base props, pre-embed tube sleeve and internal formwork track rail.  
安装底板支撑预埋套管及内模轨道



**4** Move the internal formwork to the intended place, and install in the bottom anti-spilling board, fragmented aluminium formworks and holes.  
移动内模就位，并安装底部防翻浆压板，安装零星铝模及洞口



**5** Cast in concrete.  
浇筑混凝土



**6** Dismantle fragmented aluminium formwork and the bottom anti-spilling board, move out the internal formwork and dismantle the track rail of the internal formwork.  
拆除零星铝模及底部翻浆压板，移出内模，拆除内模轨道



**7** Move out the external formwork.  
移出外模



**8** Move the precast component to the storage area, and continue with the production of the next precast components.  
预制构件移至存放区，开始下一个构件制作



# 05 MAIN COMPONENTS 主要构件

## FRAME SYSTEM 架体系统



Internal formwork and framework  
内模架



External formwork and framework  
外模架



Base formwork  
底模

## HYDRAULIC SYSTEM 液压系统



## CONTROL SYSTEM 控制系统



## OTHERS 其他



# 06 PROJECT CASES 项目案例

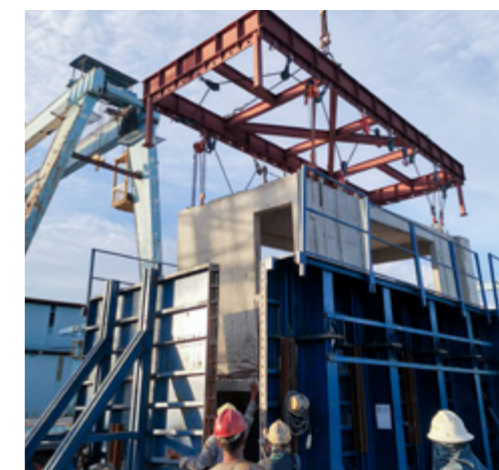


## PROJECTS OF PPVC PRECAST HOUSING MOLDS PPVC 整屋预制模具项目

### Yishun North Gaia, Singapore 新加坡 Yishun North Gaia 综合公寓项目

This project consists of 11 towers, formed by 2444 precast modules of 91 structural types. GETO supplied 35 sets of automated precast molds and 17 sets of non-automated precast molds for turnover in casting in this project.

该项目总共 11 栋楼，2444 个预制单元和 91 种预制单元结构种类。  
我司提供 35 套自动模具和 17 套非自动模具通用周转使用完成此项目。



## An Apartment Project, Southeast Asia 东南亚公寓项目

This Southeast Asia improved apartment project uses the PPVC precast housing molds to boost construction efficiency and quality. The apartment layout has irregular corners, complicating mold shrinkage guide rail distribution. GETO achieved successful demolding by adjusting the mold's internal space and guide rail configuration.

该项目为东南亚改善型公寓，采用 PPVC 整屋预制模具系统，提高效率与质量。该户型存在不规则缺角，导致模具收缩轨道分布复杂。志特通过调整模具内空间和收缩导轨分布，成功实现脱模。



## One Bernam

GETO supplied 21 sets of automated precast molds for turnover in casting 38 precast modules in this tower.

该项目为 1 栋楼，我司为 38 个预制单元提供 21 套自动模具通用周转。





Brownstone EC



Piermont Grand EC

GETO supplied 22 sets of PPVC molds for turnover in casting in this project.  
我司提供 22 套 PPVC 模具通用周转使用帮助客户完成此项目

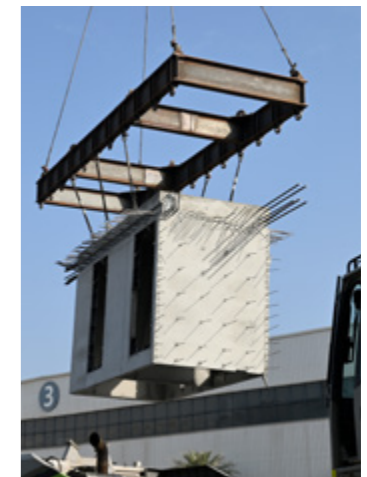
## PROJECT OF PBU AND PHS MOLDS 预制卫生间和防空壕模具项目

### HDB Public Housing Project, Singapore 新加坡政府组屋住宅项目

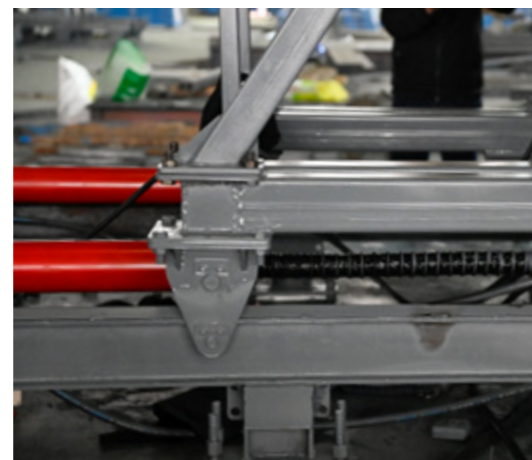
In response to Singapore's industrialization policy, GETO provides PBU and PHS Molds, ensuring efficient delivery, precise installation, and reduced construction time, while boosting project efficiency and quality.

志特响应新加坡建筑工业化政策, 提供创新的 PBU 和 PHS 产品, 在工厂预组装, 确保高效交付与精准安装, 缩短施工时间, 提升施工效率和质量。

#### ▶ PBU Molds



► PHS Molds



## GETO Group

### Headquarters:

Greater Bay Area—No. 13 Heqing Road, Tsuihang New District, Zhongshan City, Guangdong Province

### Southern China Production Base I :

Cuishan Lake Science and Technology Park, Kaiping, Jiangmen City ,Guangdong Province

### Southern China Production Base II :

Huizhou Industrial Transfer Industrial Park, Huizhou City, Guangdong Province

### Eastern China Production Base I :

Guangchang Industrial Park, Fuzhou City, Jiangxi Province

### Central China Production Base:

Hi-tech Industry Development Zone, Xianning City, Hubei Province

### Northern China Production Base:

China Aluminium Industrial Park, Linqu, Weifang City, Shandong Province

### Southwest China Production Base:

Modern Manufacturing Industrial Park, Tongnan High-Tech District, Chongqing City

### Northwest China Production Base:

The Circular Economy Park, Anding District, Dingxi City, Gansu Province

### Hainan Production Base:

Gold Medal Port Industrial Park, Lingao County, Hainan Province

### ASEAN Production Base:

Negeri Sembilan, Malaysia

### Singapore Production Base :

West Region, Singapore

### Saudi Arabia Production Base:

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